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Technical Progress Report
to the
Office of Naval Research
on the

ONR High School Internship Program - 1988
Duke University Marine Laboratory
Contract No. N00014-87-G-0267

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INTRODUCTION

The Duke University Marine Laboratory, with funding from the Office of Naval Research, conducts a ten-week summer internship program for rising seniors from three high schools: East Carteret High School, West Carteret High School and the North Carolina School of Science and Mathematics. The purpose of the program is to expose students to active, on-going research programs so that they may be able to understand what is involved in a career in marine science research.

Groups of interns are preselected by a committee of science teachers at each school and the applications are sent to the Duke University Marine Laboratory (DUML). At DUML, applications are reviewed and rated by a panel of three scientists: one from NOAA-NMFS, one from the University of North Carolina Institute of Marine Sciences, and one from DUML. Two interns are selected from each of the three schools. Interns are matched with research faculty at DUML who then contact the interns in the spring to begin the process of developing a research topic.

Interns arrive at DUML in mid-June to begin an intensive 10-week exposure to research under the supervision of a faculty member. The interns develop a project topic and a research plan, carry out the research, including data analysis, write a technical report and give an oral presentation of their research. If appropriate, the interns are encouraged to present their work with their mentor at a scientific meeting and/or develop a journal article.

The exposure to such an active research environment is hoped to encourage students at an early age to consider careers in science, particularly marine science.

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THE 1988 PROGRAM

Advertising for the internship program for the summer of 1988 began in early December 1987. In February 1988, the three high schools provided a pool of 15 applicants (7 from West Carteret, 3 from East Carteret, 5 from NC School of Science and Mathematics). A selection committee consisting of Drs. Gene Huntsman (NOAA-NMFS), Rick Luetich (UNC Institute of Marine Sciences), and Thomas Johnson (DUML) reviewed the applications. There were two interns selected from East Carteret High School, two from West Carteret High School and two from the North Carolina School of Science and Mathematics.

The program began on June 13 and concluded on August 19, with oral presentations by each intern being given on August 16. Information sheets for each intern are attached which provide biographical information as well as the name of the mentor, and project title/major tasks performed.

Prepared by: William W. Kirby-Smith, Coordinator
Office of Naval Research High School Internship
Program
Duke University Marine Laboratory
Beaufort, NC 28516
(919) 728-2111

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Duke University Marine Laboratory
Beaufort, North Carolina

Office of Naval Research - High School Internship Program

INFORMATION FOR EACH APPRENTICE

Year: 1988
Dates: 06/13-08/19

Name:	Jennifer Millicent Bennett
Address:	P. O. Box 1659 Atlantic Beach, NC 28512
Phone:	919-247-7527
Address (School, '88-'89):	West Carteret High School Morehead City, NC 28557
Phone:	919-726-1176
Last Grade Completed:	Junior
Type of School:	Public
Sex:	Female
Race/Ethnicity:	White
Installation:	Duke University Marine Laboratory Beaufort, NC 28516
Phone:	(919) 726-2111
Mentor:	Dr. John P. Sutherland
Title:	Associate Professor of Zoology
Principal Discipline of Research:	Marine Ecology
Major Tasks Performed:	Investigation of the effects of flow and feeding by <u>Styela plicata</u> on larval settlement in a subtidal community.
College of Choice:	UNC Chapel Hill
Field of Interest (Major):	Medicine

Duke University Marine Laboratory
Beaufort, North Carolina

Office of Naval Research - High School Internship Program

INFORMATION FOR EACH APPRENTICE

Year: 1988
Dates: 06/13-08/19

Name:	Marieke Joanne Brouwer
Address:	124 Charles Street Beaufort, NC 28516
Phone:	919-728-7807
Address (School, '88-'89):	East Carteret High School Beaufort, NC 28516
Phone:	919-728-3514
Last Grade Completed:	Junior
Type of School:	Public
Sex:	Female
Race/Ethnicity:	White
Installation:	Duke University Marine Laboratory Beaufort, NC 28516
Phone:	(919) 728-2111
Mentor:	Dr. William W. Kirby-Smith & Ms. Julia K. Parrish
Title:	*Research Associate Professor
Principal Discipline of Research:	Marine Ecology
Major Tasks Performed:	Investigation of the effect of fish school size on the efficiency of predation.
College of Choice: Field of Interest (Major):	UNC Chapel Hill undecided

Duke University Marine Laboratory
Beaufort, North Carolina

Office of Naval Research - High School Internship Program

INFORMATION FOR EACH APPRENTICE

Year: 1988
Dates: 06/13-08/19

Name:	Regan A. Huff
Address:	100 Kirkwood Drive Chapel Hill, NC 27514
Phone:	919-929-3466
Address (School, '88-'89):	NC School of Science & Mathematics P.O. Box 2418 1219 Broad Street Durham, NC 27705 919-286-3366
Phone:	
Last Grade Completed:	Junior
Type of School:	Public
Sex:	Female
Race/Ethnicity:	White
Installation:	Duke University Marine Laboratory Beaufort, NC 28516 (919) 728-2111
Phone:	
Mentor:	Dr. Daniel Rittschof
Title:	Research Assistant Professor
Principal Discipline of Research:	Chemical Ecology
Major Tasks Performed:	Investigation of the attraction of the hermit crab <u>Clibanarius</u> <u>vittatus</u> to a chemical in wounded gastropod flesh.
College of Choice:	Dartmouth, Pomona, Princeton
Field of Interest (Major):	undecided

Duke University Marine Laboratory
Beaufort, North Carolina

Office of Naval Research - High School Internship Program

INFORMATION FOR EACH APPRENTICE

Year: 1988
Dates: 06/13-08/19

Name:	Sharon <u>Celeste</u> Posey
Address:	920 Carnoustie Circle Cary, NC 27511
Phone:	919-467-7079
Address (School, '88-'89):	NC School of Science & Mathematics P.O. Box 2418 1219 Broad Street Durham, NC 27705 919-286-3366
Phone:	
Last Grade Completed:	Junior
Type of School:	Public
Sex:	Female
Race/Ethnicity:	White
Installation:	Duke University Marine Laboratory Beaufort, NC 28516 (919) 728-2111
Phone:	
Mentor:	Dr. Richard B. Forward
Title:	Professor of Zoology
Principal Discipline of Research:	Physiology of Marine Animals
Major Tasks Performed:	Investigation of who controls larval release in fiddler crabs through shifted light-dark cycles and effects of ablating ovigerous females on larval release.
College of Choice:	Duke, UNC-CH, Wake Forest, Cal Tech
Field of Interest (Major):	Molecular biology, physics

Duke University Marine Laboratory
Beaufort, North Carolina

Office of Naval Research - High School Internship Program

INFORMATION FOR EACH APPRENTICE

Year: 1988

Dates: 06/13-08/19

Name:	Dewey Michael Sasser
Address:	Rt. 2, Box 604 Beaufort, NC 28516
Phone:	919-728-4946
Address (School, '88-'89):	East Carteret High School Beaufort, NC 28516
Phone:	919-728-3514
Last Grade Completed:	Junior
Type of School:	Public
Sex:	Male
Race/Ethnicity:	White
Installation:	Duke University Marine Laboratory Beaufort, NC 28516
Phone:	(919) 728-2111
Mentor:	Dr. William W. Kirby-Smith
Title:	Research Associate Professor
Principal Discipline of Research:	Marine Ecology
Major Tasks Performed:	A comparative investigation of the effects of forest runoff and farm runoff on the South River estuary.
College of Choice:	NC State Sch. Engineering or Rose-Hulman Inst. Technology
Field of Interest (Major):	Engineering

Duke University Marine Laboratory
Beaufort, North Carolina

Office of Naval Research - High School Internship Program

INFORMATION FOR EACH APPRENTICE

Year: 1988

Dates: 06/13-08/19

Name:	Joseph Coleman Taylor
Address:	112 Midyette Avenue Morehead City, NC 28557
Phone:	919-247-4926
Address (School, '88-'89):	West Carteret High School Morehead City, NC 28557
Phone:	919-726-1176
Last Grade Completed:	Junior
Type of School:	Public
Sex:	Male
Race/Ethnicity:	White
Installation:	Duke University Marine Laboratory Beaufort, NC 28516 (919) 728-2111
Phone:	
Mentor:	Dr. Thomas C. Johnson
Title:	Associate Professor of Geology
Principal Discipline of Research:	Geological Oceanography
Major Tasks Performed:	Sedimentological investigation of Lake Turkana (Kenya); percent carbonate per depth down core.
College of Choice:	University of Virginia
Field of Interest (Major):	Marine archaeology

**Duke University Marine Laboratory
Beaufort, North Carolina**

Office of Naval Research - High School Internship Program

INFORMATION FOR EACH MENTOR

Year: 1988

Dates: 06/13-08/19

Name: Richard B. Forward, Jr.

Installation: Duke University Marine Laboratory
Beaufort, NC 28516

Phone: (919) 728-2111

Sex: Male

Race/Ethnicity: White

Highest Degree Held: Ph.D.

**Principal Field of
Research:** Zoology

**Number of Years of
Mentorship:** 3

**Number of Apprentices
this Year (1988):** 1

Duke University Marine Laboratory
Beaufort, North Carolina

Office of Naval Research - High School Internship Program

INFORMATION FOR EACH MENTOR

Year: 1988
Dates: 06/13-08/19

Name:	William W. Kirby-Smith
Installation:	Duke University Marine Laboratory Beaufort, NC 28516
Phone:	(919) 728-2111
Sex:	Male
Race/Ethnicity:	White
Highest Degree Held:	Ph.D.
Principal Field of Research:	Marine Ecology
Number of Years of Mentorship:	5
Number of Apprentices this Year (1988):	2

Duke University Marine Laboratory
Beaufort, North Carolina

Office of Naval Research - High School Internship Program

INFORMATION FOR EACH MENTOR

Year: 1988
Dates: 06/13-08/19

Name:	Thomas C. Johnson
Installation:	Duke University Marine Laboratory Beaufort, NC 28516
Phone:	(919) 728-2111
Sex:	Male
Race/Ethnicity:	White
Highest Degree Held:	Ph.D.
Principal Field of Research:	Geology
Number of Years of Mentorship:	3
Number of Apprentices this Year (1988):	1

Duke University Marine Laboratory
Beaufort, North Carolina

Office of Naval Research - High School Internship Program

INFORMATION FOR EACH MENTOR

Year: 1988

Dates: 06/13-08/19

Name:	Daniel Rittschof
Installation:	Duke University Marine Laboratory
Phone:	Beaufort, NC 28516 (919) 728-2111
Sex:	Male
Race/Ethnicity:	White
Highest Degree Held:	Ph.D.
Principal Field of Research:	Zoology
Number of Years of Mentorship:	6
Number of Apprentices this Year (1988):	1

**Duke University Marine Laboratory
Beaufort, North Carolina**

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INFORMATION FOR EACH MENTOR

Year: 1988
Dates: 06/13-08/19

Name:	John P. Sutherland
Installation:	Duke University Marine Laboratory Beaufort, NC 28516
Phone:	(919) 728-2111
Sex:	Male
Race/Ethnicity:	White
Highest Degree Held:	Ph.D.
Principal Field of Research:	Zoology
Number of Years of Mentorship:	1
Number of Apprentices this Year (1988):	1